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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,248

09/25/2006

Hideki Isono

Q80706

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23373 7590 04/01/2010
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

FALASCO, LOUIS V

ART UNIT

PAPER NUMBER

1785

NOTIFICATION DATE

DELIVERY MODE

04/01/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
PPROCESSING@SUGHRUE.COM
USPTO@SUGHRUE.COM

Office Action Summary	Application No. 10/594,248	Applicant(s) ISONO, HIDEKI	
	Examiner LOUIS FALASCO	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 4-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Papers Received

1. This application is acknowledged as a Request for Continuing Examination.
2. The Amendment and Remarks filed 03/11/2010 are acknowledged.

Claims

Election/Restriction of Invention

3. Applicant's election of Group II method invention without traverse 12/18/08 is again acknowledged. With instant claims the elected method invention is in claims 11-17, the claims under consideration are 11 to 17.

Status of rejections made in the previous Office:

4. Rejections made in the previous Office have been withdrawn in view of the amendments to the claims and arguments in the Remarks received 03/10/2010.

Claim Rejections - 35 U.S.C. §102 and 35 U.S.C. §103

Statutory Basis

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejections

New rejections made in the action

7. Claims 11-17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Isono et al** (US 2005/0284179).

The applied US 2005/0284179 reference has a common inventor, **Hideki Isono**, with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Isono et al teaches a method of manufacturing a magnetic disk glass substrate that include chemical strengthening glass by ion exchange using a plurality of

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temperature strengthening step, to form plural strengthen layers, differing in extents by differing temperature treatments resulting in different diffusions of greater and lesser size molecular packing. **Isono et al** teaches the method Li, Na K *alkali metal nitrates* where the smallest ion radius *alkali* is within 0.0001% to 0.3% (**Isono et al** ¶[0042], [0093]-[0099]), encompassing the ratio instantly claimed - as *alkali metal nitrates* strengthened as summarized at TABLE 1 **Isono et al** ¶[0095]. **Isono et al** does not characterize these layer as being strengthened differentially with inherent compressive and tension within the stacked layer substrate, with the use of the temperature variations in the layered strengthening processes of **Isono et al** – showing step heating and cooling causing the strengthening salts in contact with the glass at differential to heating and cooling temperatures (**Isono et al** ¶[0021]- [0025] and ¶[0009]), anticipating the subject matter of the claims. Alternate to anticipation, it would have at least obvious as a matter of inherency that tension would have accompanied a layer having a lesser strength between higher strength layers in **Isono et al**, though not a specified characteristic, the tension and compression between these layers would have reasonably been expected as an inherent characteristic. MPEP 2112 II.

- As regards claim 12 polishing steps and materials the mirror-finished surfaces see **Isono et al** ¶[0032], [0065].
- As regards claim 13 the mirror-finished surface and have an arithmetic mean

roughness see **Isono et al ¶[0045], [0065]**.

- As regards claim 14 magnetic layer see **Isono et al ¶[0044]**.
- As regards claim 15 lithium nitrate see **Isono et al ¶[0042]** and TABLE 1 in **Isono et al ¶[0095]**.
- As regards claim 16, for lithium ppm range see TABLE 1 of **Isono et al ¶[0095]**, and Table 1 where the range would be expected to encompass the 10-3000ppm range given the presence of Li^+ ranging 2 weight percent of nitrate ratio.
- As regards claim 17 aluminosilicate glass see **Isono et al ¶[0040], [0043], [0051], [0054]**.

Comments on antedating references

8. Applicant's claim for the benefit of a prior-filed provisional application is acknowledged. Applicant has not complied with the conditions for receiving the benefit of an earlier filing date under 37 CFR 1.78(a)(5)(iv) as follows:

"If the prior-filed provisional application was filed in a language other than English and both an English-language translation of the prior-filed provisional application and a statement that the translation is accurate were not previously filed in the prior-filed provisional application, applicant will be notified and given a period of time within which to file, in the prior-filed provisional application, the translation and the statement. If the notice is mailed in a pending nonprovisional application, a timely reply to such a notice must include the filing in the nonprovisional application of either a confirmation that the translation and statement were filed in the provisional application, or an amendment or

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Supplemental Application Data Sheet withdrawing the benefit claim, or the nonprovisional application will be abandoned. The translation and statement may be filed in the provisional application, even if the provisional application has become abandoned.” (emphasis added).

Double Patenting

9. This is a provisional obvious-type double patenting rejection because, though a Notice of Allowance has been sent the conflicting claims have not yet in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Provisional Double Patenting rejection

10. Claims 11 to 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 and 15 of copending U.S. Patent Application No. 11/078324 (referencing the paragraphs of PG Publication SN 2005/0284179). This is a provisional double patenting rejection since, though a Notice of Allowance has been issued, the claims in Application No. 11/078324 have not been patented.

Isono et al claims a method of manufacturing a magnetic glass substrate which includes including a compressive stress layers for strengthened glass with a layer of having three *alkali metal nitrates* with relatively sized ion radius *alkali metal nitrates* (**Isono et al** ¶[0042], [0093]-[0099]). Though the claims of Application No. 11/078324 do not specifically characterize the layer strengthen layer, strengthen at a lower temperature as a *tension* layer between higher temperature compressive characterized layers in the method claimed in Application No. 11/078324, the claims of application No. 11/078324 include the temperature variations in strengthening differential layers, changing a degree of strengthening, inherently tensioning the lesser strengthen layer in sandwiched between compressive layers - temperature strengthen layers as shown in the Examples of the alternating layers summarized at TABLE 1 at **Isono et al** ¶[0095], defining the temperature sequence claimed, for the step heating and

cooling strengthening salt contacts with the glass exposed to heating and cooling (**Isono et al** ¶[0021]- [0025] and ¶[0009]), inherently tensing between compressing layers.

- As regards claim 12 polishing steps and materials the mirror-finished surfaces see line 3 of **Isono et al** claim 1 and definition in the specification at ¶[0032], [0065].
- As regards claim 13 the mirror-finished surface and have an arithmetic mean roughness this is offered as a definition of the polishing extent claimed in **Isono et al** see **Isono et al** ¶[0045], [0065].
- As regards claim 14 magnetic layer the presence of a magnetic layer is offered as a definition of the 'magnetic disk' claimed in **Isono et al** see definition at **Isono et al** ¶[0109].
- As regards claim 15 lithium nitrate this is the lithium salt used in the claimed strengthening steps see **Isono et al** ¶[0094]-[0098].
- As regards claim 16, for lithium ppm range see TABLE 1 of **Isono et al** ¶[0095], further Table 1 where the range would be expected to encompass the 10-3000ppm range given the presence of *Li* ranging 2 weight percent of nitrate ratio.
- As regards claim 17 aluminosilicate glass this is the definition for the claimed glass processing see **Isono et al** ¶[0040], [0043], [0051], [0054].

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11. The patent disclosures of copending U.S. Patent Application No. 11/078324 above, cited as PG Publication SN 2005/0284179, were not cited as prior art additions, analogous to the non-obviousness requirement of 35 USC 103 as explained at applicants cited page 1846 of *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279, 23 USPQ2d 1839 (Fed. Cir. 1992), but as defining terms in the claims; the meaning of the what has been claimed in U.S. Patent Application No. 11/078324. As definitions for claimed features, the disclosed meaning give the limitations of these features, properly used in the double patenting rejections.

Other References

12. **Eto et al** (US 6134918) is cited but not applied as teaching treatments with heated acids.

Conclusion

13. The claims are 1 and 4-17.

- Restriction has been required, elected claims 11 to 17 are under consideration and non-elected claims 1 and 4-10 withdrawn from consideration.
- No claim has been allowed.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached at (571)272-1291. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/L. F./
Examiner, Art Unit 1794

/Kevin M Bernatz/
Primary Examiner, Art Unit 1794

March 23, 2010